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To: R. P. Heretick **Date:** October 14, 1992

From: S. Tafur

Subject: **Paper Development Weekly Summary**

Wood Pulp Paper

GC-MS results for the pyrolysis of wood and flax papers were analyzed for two particular mass fragments that are characteristic of xylan and lignin pyrolysis products. The wood paper yielded a much larger peak for the xylan product than the flax paper, as expected from the hemicellulose compositions of the pulps.

Cigarette Paper Specifications Study

Machinability trials were run at the Manufacturing Center using Kimberly-Clark cigarette papers ranging in tensile strength from about 0.05 to 0.13 kg/mm width. Three bobbins each of seven different types of paper were scheduled to be run on a Protos maker at 10,000 cigarettes per minute. As expected, some difficulty was encountered in running the papers of lower tensile strengths (.05 to .06 kg/mm). One box of 4,000 cigarettes was obtained for each successfully run bobbin for quality inspections. Samples of paper from each bobbin will be evaluated for tensile strength, elongation, chalk content, porosity, basis weight, and citrate level. Further evaluation of the results is in progress.

Reduced Sidestream

Cigarettes were made in Semiworks with a series of U. Maine papers made with different types of calcium carbonate with selected sizings and several KC calcium carbonate papers. Samples have been submitted to CTSD for analytical smoking and sidestream visibility testing is in progress. Subjective comparisons among the various calcium carbonates and between comparable U. Maine and KC papers are also in progress.

Kimberly-Clark low porosity, calcium carbonate base papers [grade 003-V2 (45 g/m^2) and grade 078 (40 g/m^2)] were sized with a series of monopotassium phosphate (MKP) and acid combinations to produce reduced pH solutions. These papers were designed as potential candidates for increased sidestream reduction over current papers being used on low sidestream models. Cigarettes were made in Semiworks, including one model with a high ET content in the filler. They will be submitted to CTSD for analytical smoking and sidestream visibility testing and subjective evaluations will be conducted.

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